v1.25

1.25

Eltex SC - . OS Ubuntu 20.

, .

*:

- — 1;
- — i5 3,0 ;
- — 8 ;
- — 1000 ;
- (/) — 2000 IOPS.

.

Eltex SC

Eltex SC 1.25 Ubuntu 20.04. Eltex SC (1.24) : Eltex SC.

1.19.4 deb- .

1.25 eltex-notification-gw(ngw) **notification.properties.j2.** **vars/default.yml**

Eltex SC , , !

Ansible . Ansible .

Ansible — , Python . , Eltex SC.

:

1. Ansible Ubuntu 20.04.

:

Ansible

```
apt update
apt install --install-recommends linux-generic-hwe-20.04-edge
apt install software-properties-common
add-apt-repository --yes --update ppa:ansible/ansible
apt install ansible
```

Ansible .

2. (**v2.9**):

Ansible

```
ansible --version
```

3. Ansible .

:

```
ansible-galaxy collection install community.general
ansible-galaxy collection install community.crypto
ansible-galaxy collection install community.docker
```

4. .

.
tar.gz, **/etc** **root**.

:

```
tar -C /etc -xvf ansible-iot-1.25.tar.gz
```

.

(/) Ansible **/etc/ansible-iot-1.25**

5. **/etc/ansible-iot-1.25/inventory**

, **nano**. **root** **ansible_sudo_pass**:

> ⚠ **root** **rootpasswd**
>
> .

:

inventory

```
[iot]
localhost   ansible_connection=local    ansible_sudo_pass=rootpasswd
[elk]
localhost   ansible_connection=local    ansible_sudo_pass=rootpasswd
[monitoring]
localhost   ansible_connection=local    ansible_sudo_pass=rootpasswd
```

6. Eltex SC.

/etc/ansible-iot-1.25/vars/default.yml

, **nano**. **IP-** **iot_server_name:**

vars/default.yml

```
---
iot_server_name: my.test.server
elk_server_name: "{{ iot_server_name }}"
monitoring_server_name: "{{ iot_server_name }}"
mongodb_version: 5
use_external_mongodb: false
external_mongodb_addr: "{{ iot_server_name }}"
external_mongodb_port: 27017
web_server_name: "{{ iot_server_name }}"
web_http_port: 80
web_https_port: 443
core_ctlgate_tcp_port: 8069
core_ctlgate_port: 8070
core_ctlgate_ssl_port: 8072
core_api_port: 8071
core_api_ssl_port: 8073
use_https_for_ui: true
use_https_for_api: false
use_https_for_camera_links: true
use_ui_proxy_for_api: false
web_enable_certbot: false
web_certbot_email: test@email.com
mail:
  smtp:
    submitter: test@email.com
    password: password
    senderPrefix: " Eltex-SC"
    auth: "true"
    host: email.com
    port: 587
flussonic_url: ""
flussonic_api_key: ""
flussonic_operator_id: ""
flussonic_admin_login: ""
install_dir: /storage/iot
install_dir_for_elk: /storage/elk
install_dir_for_monitoring: /storage/monitoring
```

, , e-mail. :

mail:

smtp:

submitter — e-mail;

password — e-mail;

auth — smtp ( );

senderPrefix — ;

host — smtp-;

port — smtp- .

vars/default.yml:

- **iot_server_name** — (IP-) , ;
- **elk_server_name** — (IP-) , ELK;

- **monitoring_server_name** — (IP-) , ;
- **mongodb_version** — (—) MongoDB (5);

> , , 4.

- **use_external_mongodb** — MongoDB;

> true **use_external_mongodb** MongoDB , — **external_mongodb_addr external_mongodb_port.**

- **external_mongodb_addr** — MongoDB;
- **external_mongodb_port** — MongoDB;
- **web_http_port** — HTTP, web;
- **web_https_port** — HTTPS, web;
- **core_*_port** — IoT Core;
- **use_https_for_ui** — HTTPS web (true, , web_https_port. false, HTTP , web_http_port);
- **use_https_for_api** — HTTPS (,);
- **use_https_for_camera_links** — HTTPS ;
- **use_ui_proxy_for_api** — web_server_name iot_server_name web_http_port/web_https_port core_api_port/core_api_ssl_port API;
- **web_enable_certbot** — certbot Let's Encrypt;
- **web_certbot_email** — e-mail . Let's Encrypt;
- **mail.smtp.*** — NGW;
- **flussonic_url** — Watcher-a Flussonic ();
- **flussonic_api_key** — API, ;
- **flussonic_operator_id** — ();
- **flussonic_admin_login** — ();
- **install_dir** — , (,);
- **install_dir_for_elk** — , ELK (,);
- **install_dir_for_monitoring** — , (,).

vars/service_parameters.yml:

/vars/service_parameters.yml

```
--
iot_release: 1.25
registry: hub.eltex-co.ru
container_name_suffix: ""
network_name_suffix: ""
db_mapped_port: 27017
mqtt_broker_external_mapped_port: 8883
mqtt_broker_internal_mapped_port: 8083
olapservice_mapped_port: 8023
olapservice_db_mapped_port: 8123
ngw:
  mapped_port: 8040
  db:
    name: notification-gw
    user: javauser
    password: javapassword
    mapped_port: 3306
captcha_mapped_port: 8088
elastic_rest_port: 9200
elastic_nodes_port: 9300
logstash_port: 5000
logstash_api_port: 9600
kibana_port: 5601
prometheus_port: 9090
grafana_port: 3000
services:
with_distro_preparing_step: true
iot_core_log_level: INFO
export_mongo_port: false
export_mqtt_broker_port: false
export_olapservice_port: false
export_olapservice_db_port: false
export_ngw_db_port: false
export_ngw_port: false
export_captcha_port: false
```

/vars/service_parameters.yml

```
without_mqtt: false
without_olap: false
without_core: false
without_web: false
without_elk: true
testdata_enable: false
swagger_enable: false
mqttbroker_enable: true
olapservice_enable: true
captcha_level: "easy"
captcha_allowed_sizes:
  - "312x45"
iot_core_db: iot-core
iot_fs_db: iot-fs
iot_licenses_db: iot-licenses
iot_events_db: iot-events
mqtt_broker_db: iot-broker
olap_service_db: iotcore
mjollnir_url: "http://92.125.152.58:8078/api/v1"
script_step_delay: 2
script_critical_repetition: 2
script_max_delay: 10
script_stoppable: true
```

vars/service_parameters.yml:

- **iot_release** — core & web;
- **registry** — docker registry, docker-, ( );
- **container_name_suffix** — ;
- **network_name_suffix** — docker docker;
- ***_port** — docker-compose ;
- **ngw.db.*** — MySQL NGW;
- **services** — (services_restart.yml). , ();
- **with_distro_preparing_step** — . "" . IoT Ansible, ;
- **iot_core_log_level** — IoT Core;
- **export_mongo_port** — MongoDB docker ;
- **export_mqtt_broker_port** — MQTT- docker API ;
- **export_olapservice_port** — OLAP- docker API ;
- **export_olapservice_db_port** — ClickHouse docker ;
- **export_captcha_port** — CAPTCHA;
- **export_ngw_port** — NGW;
- **without_mqtt** — MQTT Broker.
- **without_core** — core;
- **without_web** — web;
- **without_elk** — elk;
- **testdata_enable** — ;
- **swagger_enable** — swagger (API);
- **mqttbroker_enable** — MQTT Broker;
- **olapservice_enable** — Olap service;
- **captcha_allowed_sizes** — , ;
- **iot_*_db** — ;
- **mqtt_broker_db** — MongoDB, MQTT Broker.
- **olap_service_db** — Clickhouse, Olap service.
- **mjollnir_url** — ;
- **script_step_delay** — ;
- **script_critical_repetition** — ;
- **script_max_delay** — ;
- **script_stoppable** — .

7. :

```
cd /etc/ansible-iot-1.25
ansible-playbook install_iot.yml
```

Eltex SC c MongoDB, mongodb.org APT (, **/etc/apt/sources.list.d/mongodb-org-4.4.list**).

8. :

```
docker ps
```

docker ps

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
25c08d17a4ae	hub.eltex-co.ru/iot-clickhouse-backup:1.25	/entrypoint.sh /ent…	2 minutes ago	Up 2 minutes		iot-olapservice-db-backup
36c21b863cc9	hub.eltex-co.ru/iot-double-web:1.25	/docker-entrypoint.…	2 minutes ago	Up 2 minutes	0.0.0.0:80->80/tcp, :::80->80/tcp, 0.0.0.0:443->443/tcp, :::443->443/tcp	iot-double-web
01fe2697e5ff	hub.eltex-co.ru/iot-core:1.25	java -Dspring.profi…	2 minutes ago	Up 2 minutes	.0.0.0:8069-8073->8069-8073/tcp, :::8069-8073->8069-8073/tcp	iot-core
07d1f93831bd	hub.eltex-co.ru/iot-mqttbroker-mongo:1.25	java -cp @/app/jib-…	2 minutes ago	Up 2 minutes	0.0.0.0:8883->8883/tcp, :::8883->8883/tcp	iot-mqtt-broker
d1c736dc27d0	hub.eltex-co.ru/eltex-ngw:1.23-602	/usr/sbin/ngw_start…	2 minutes ago	Up 2 minutes		iot-ngw-sc

228d41c96cba	hub.eltex-co.ru/iot-olapservice:1.25	java -cp @/app/jib-…	2 minutes ago	Up 2 minutes		iot-olapservice
e8e2899f2c8d	hub.eltex-co.ru/iot-captcha:1.25	java -jar LibreCapt…	2 minutes ago	Up 2 minutes	8888/tcp	iot-captcha
57c02941cc4f	hub.eltex-co.ru/iot-mongo5:1.25	/entrypoint.sh	2 minutes ago	Up 2 minutes	0.0.0.0:27017->27017/tcp, :::27017->27017/tcp	iot-mongo
7c3d8d5c4137	hub.eltex-co.ru/iot-mysql:1.25	docker-entrypoint.s…	2 minutes ago	Up 2 minutes	3306/tcp, 33060/tcp	iot-iot-mysql
6c61b34c3a41	hub.eltex-co.ru/iot-clickhouse-server:1.25	/entrypoint.sh	2 minutes ago	Up 2 minutes	9000/tcp, 0.0.0.0:8123->8123/tcp, :::8123->8123/tcp, 9009/tcp	iot-olapservice-db

: http://[Eltex SC]

iot_server_name /etc/ansible-iot-1.25/vars/default.yml

API .

9. .

.

, .

Eltex SC MongoDB

MongoDB, .. Eltex SC / mongodb:

mongodb.org . deb- (,).

1. MongoDB (**4.4**):

```
sudo apt-get update
sudo apt-get upgrade
sudo apt-get install -y software-properties-common gnupg build-essential net-tools dkms
wget https://www.mongodb.org/static/pgp/server-4.4.asc
sudo apt-key add server-4.4.asc
echo "deb [ arch=amd64,arm64 ] https://repo.mongodb.org/apt/ubuntu focal/mongodb-org/4.4 multiverse" | sudo tee /etc/apt/sources.list.d/mongodb-org-4.4.list
sudo apt-get update
sudo apt-get install -y mongodb-org
sudo service mongod start
sudo service mongod status
```

2. **/etc/mongod.conf net** :

```
port: 27017
bindIp: 0.0.0.0
```

mongod:

```
sudo service mongod restart
sudo service mongod status
```

3. Ansible :

```
sudo add-apt-repository --yes --update ppa:ansible/ansible
sudo apt install ansible
sudo ansible-galaxy collection install community.general
sudo ansible-galaxy collection install community.crypto
sudo ansible-galaxy collection install community.docker
```

4. :

```
tar -C /etc -xvf ansible-iot-1.25.tar.gz
```

. (/) Ansible **/etc/ansible-iot-1.25.**

5. **/etc/ansible-iot-1.25/inventory.**

, **nano**. **root** **ansible_sudo_pass**:

> ⚠ **root** **rootpasswd**
>
> .

inventory

```
[iot]
localhost   ansible_connection=local    ansible_sudo_pass=rootpasswd
[elk]
localhost   ansible_connection=local    ansible_sudo_pass=rootpasswd
[monitoring]
localhost   ansible_connection=local    ansible_sudo_pass=rootpasswd
```

6. , . **/etc/ansible-iot-1.25/vars/default.yml** **/etc/ansible-iot-1.25/vars/service_parameters.yml.**

default.yml , **nano**. IP- **iot_server_name.**

use_external_mongodb `true`.

vars/default.yml

```
iot_server_name: my.test.server
...
use_external_mongodb: true
external_mongodb_addr: my.remote.mongo.server
external_mongodb_port: 27017
...
```

!

`true` **use_external_mongodb** MongoDB , — :

- **external_mongodb_addr** (, **iot_server_name**);

- **external_mongodb_port.**

7. **service_parameters.yml** , **nano**. **export_mongo_port** `true`.

/vars/service_parameters.yml

```
...
export_mongo_port: true
...
```

8. :

```
cd /etc/ansible-iot-1.25
sudo ansible-playbook install_iot.yml
```

: http://[Eltex SC]

iot_server_name **/etc/ansible-iot-1.25/vars/default.yml**

9. .

.

, .

:

```
ansible-playbook restart_iot.yml --extra-vars '{"services":["web", "core", "broker", "olapservice"]}'
```

, ("web", "core", "broker", "olapservice"). "services" --extra-vars, .
:

```
ansible-playbook stop_iot.yml --extra-vars '{"services":["web", "core", "broker", "olapservice"]}'
```

:

```
ansible-playbook update_iot.yml
```

:

```
ansible-playbook install_iot.yml
```

/etc/ansible-iot-1.25/templates , web :

- **default-for-docker.yml.j2**
- **eltex-sc-web.j2**

: **/storage/iot/core/var/log/eltex-sc/server.log**

. : server-YYYY-MM-DD.NN.log, YYYY-MM-DD — , NN — .

install_iot.yml:

ansible-playbook install_iot.yml

/etc/ansible-iot-1.25/vars/default.yml (**flussonic-**). , **/etc/ansible-iot-1.25/vars/default.yml,** , .

default-for-docker.yml.j2:

```
#    : , , ,
testData:
  environment: {{ 'true' if testdata_enable else 'false' }}

fileStorage:
  path: "/var/lib/eltex-sc/files"

controllerGateTCP:
  port: {{ core_ctlgate_tcp_port }}

controllerGate:
  port: {{ core_ctlgate_port }}

controllerGateSecurity:
  port: {{ core_ctlgate_ssl_port }}
  key: "/etc/ssl/private/eltex-sc-ctl-gate.key"
  crt: "/etc/ssl/certs/eltex-sc-ctl-gate.crt"


api:
  port: {{ core_api_port }}
  sslPort: {{ core_api_ssl_port }}
```

```
ui:
  serverName: "{{ web_server_name }}"
{% if web_http_port != 80 or web_https_port != 443 %}
  #  UI      ,      UI
  #  .    port/sslPort      URL  UI (WEB)
{% if web_http_port != 80 %}
  port: {{ web_http_port }}
{% endif %}
{% if web_https_port != 443 %}
  sslPort: {{ web_https_port }}
{% endif %}
{% endif %}

mqttBroker:
  enabled: true
  #  MQTT-,
  host: "broker"
  #  MQTT-,       MQTT
  port: 8883
  # ,      REST API,
  apiPort: 8083
  #  URL,    MQTT-,  MQTT-
  remoteAccessURL: "{{ iot_server_name }}:{{ mqtt_broker_external_mapped_port }}"
  #   ,    MQTT-   "Offline"
  offlineTimeoutSec: 300

olapservice:
  host: "olapservice"
  port: 8023

captcha:
  host: "captcha"
  port: 8088
  level: "easy"
```

```
resilience4j:
  #  ,
  #
  circuitbreaker:
    configs:
      default:
        #  ,
        failureRateThreshold: 50
        #   ,
        slowCallRateThreshold: 50
        # ,
        slowCallDurationThreshold: 5s
        #  ,
        permittedNumberOfCallsInHalfOpenState: 5
        #   ,         (COUNT_BASED/TIME_BASED)
        slidingWindowType: COUNT_BASED
        #
        slidingWindowSize: 100
        #
        automaticTransitionFromOpenToHalfOpenEnabled: true
        # ,     circuitbreaker
        waitDurationInOpenState: 5s
        #
        minimumNumberOfCalls: 20
    instances:
      eventlog:
        baseConfig: default
      flussonic:
        baseConfig: default
        slowCallDurationThreshold: 3s
        waitDurationInOpenState: 20s
      ivideon:
        baseConfig: default
        slowCallDurationThreshold: 3s
        waitDurationInOpenState: 20s

#
  timelimiter:
    configs:
      default:
        # ,
        timeoutDuration: 10s
    instances:
      eventlog:
        baseConfig: default
      flussonic:
        baseConfig: default
        timeoutDuration: 3s
      ivideon:
        baseConfig: default
        timeoutDuration: 3s
```

```
#
bulkhead:
  configs:
    default:
      #    ,  bulkhead
      maxConcurrentCalls: 20
  instances:
    eventlog:
      baseConfig: default
    flussonic:
      baseConfig: default
      maxConcurrentCalls: 10
    ivideon:
      baseConfig: default
      maxConcurrentCalls: 10
# .     :   ,
retry:
  configs:
    default:
      #    (  )
      maxAttempts: 2
      #     ()
      waitDuration: 500
  instances:
    eventlog:
      baseConfig: default
    flussonic:
      baseConfig: default
    ivideon:
      baseConfig: default
#  .
ratelimiter:
  configs:
    default:
      # ,         ()
      timeoutDuration: 25ms
      #    ()
      limitRefreshPeriod: 1000
      #  ,
      limitForPeriod: 10
  instances:
    eventlog:
      baseConfig: default
    flussonic:
      baseConfig: default
    ivideon:
      baseConfig: default
```

```
#      UI(WEB)  API
server:
  #   ,     / UI
  name: "{{ iot_server_name }}"
  #   https://     UI
  useHttpsForUi: {{ 'true' if use_https_web_from_core else 'false' }}
  #   https://     API
  useHttpsForApi: false
  #  ui.serverName  server.name  ui.port/ui.sslPort  api.port/api.sslPort
  #     API
  useUiProxyForApi: false
  oauth2:
    #   access-  .     5
    accessTokenTimeToLive: 3600
  #  jetty
  jetty:
    #
    connection-idle-timeout: 120000ms
    max-http-form-post-size: 200000B
    #
    threads:
      acceptors: -1
      selectors: -1
      #
      idle-timeout: 120000ms
      #
      min: 32
      #
      max: 256
      #
      max-queue-capacity: 32768

electricMeterScheduler:
  cron: "0 0/30 * * * ?"

electricMeterArchiveScheduler:
  cron: "0 0 17 * * ?"
```

```
services:
  ngw:
    host: "ngw-sc"
    port: 8040
  alarmService:
    enabled: false
loginInfo:
    #    loginInfo ( ),
    ttl: 180
    #     ( )     ,
    #     loginInfo (    )
    activityTimeLimit: 180
  user:
    #     ( )
    #
    allowedInactivePeriod: 180


  push:
    firebase:
      enabled: true
    apns:
      enabled: true

dictionary:
  notificationPath: "dictionary/notificationDict.yml"
  automationPath: "dictionary/automationDict.yml"
  guardPath: "dictionary/guardDict.yml"
  inputKeysPath: "dictionary/inputKeysDict.yml"
  deprecatedKeysPath: "dictionary/deprecatedKeysDict.yml"
  substitutionKeysPath: "dictionary/substitutionKeys.yml"


languageInterface:
  language: "ru"

# Hazelcast instance configuration -> Move it to separate microservice -> Use hz-client here
hazelcast:
  instanceName: "iot-core-hz-instance{{ container_name_suffix }}"
  clusterName: "iot-core{{ container_name_suffix }}"
  network:
    port: "5705"
#    member: "127.0.0.1:5701"

mjollnir:
  sync-period: "0 0 23 1/1 * ?"
  login: "platform"
  password: "platform"
  url: {{ mjollnir_url }}
```

```
#    iot-core
iot-core:
  host: "{{ mongodb_addr }}"
  port: {{ mongodb_port }}
  # hosts: "192.168.0.1:27017, 192.168.0.2"
  user: ""
  password: ""
  database: "{{ iot_core_db }}"

#     iot-fs
file-storage:
  host: "{{ mongodb_addr }}"
  port: {{ mongodb_port }}
  user: ""
  password: ""
  database: "{{ iot_fs_db }}"

#
license-storage:
  host: "{{ mongodb_addr }}"
  port: {{ mongodb_port }}
  user: ""
  password: ""
  database: "{{ iot_licenses_db }}"

#     eventlog
eventlog:
  host: "{{ mongodb_addr }}"
  port: {{ mongodb_port }}
  user: ""
  password: ""
  database: "{{ iot_events_db }}"

test-base:
  host: "localhost"
  port: 27018

monitoring-system:
  countAttempt: 3
  delayAttempt: 0

kafka:
  enabled: false
  bootstrap-servers: "localhost:9092"

#   ,      android. ApiKey  .
video:
  flussonic:
    url: "{{ flussonic_url }}"
    apiKey: "{{ flussonic_api_key }}"
    operator_id: "{{ flussonic_operator_id }}"
    admin_login: "{{ flussonic_admin_login }}"
    fake_camera_url: "rtsp://wowzaec2demo.streamlock.net/vod/mp4:BigBuckBunny_115k.mp4"
  ivideon:
    #ip,  ivideon   ,
    ip_for_catch_event: ""
```

```
#    SSL
ssl:
  key: "/etc/ssl/private/eltex-sc-api.key"
  crt: "/etc/ssl/certs/eltex-sc-api.crt"

proxy:
  enabled: false
  host: ""
  port: 8050

billing:
  cron: "0 0 0 * * ?"
  ftp:
    host: "127.0.0.1"
    port: 21
    login: "user"
    password: "password"
    workdir: "test"

notifications:
  duplicate_delay_sec: 0
  antispam_time_sec: 0
  delay_push_time_millisec: 250

guard:
  deviceRequestDelay: 15000

#   swagger.    key -     swagger.
springdoc:
  swagger-ui:
    enabled: {{ 'true' if swagger_enable else 'false' }}
    key: ""

controller:
  delay_answer_from_control_millisec: 12000
  number_of_ping_threads: 1

#         ()
# https://yandex.ru/dev/dialogs/smart-home/doc/concepts/about.html
yandex-skill:
  # Id  ,        authorization code
  client-id: "YandexClientIdChangeMe"
  client-password: "PasswordChangeMe"
  #   API     API
  redirect-uri: "https://social.yandex.net/broker/redirect"
  callback-uri: "https://dialogs.yandex.net/api/v1/skills"
  # Id ,       (   )
  skill-id: ""
  # OAuth-,       (    )
  oauth-token: ""
```

```
#
# https://developers.sber.ru/docs/ru/smarthome/overview
sber-skill:
  # Id  ,        authorization code
  client-id: "SberClientIdChangeMe"
  client-password: "PasswordChangeMe"
  #   API     API
  redirect-uri: "https://gateway.iot.sberdevices.ru/gateway/v1/binder/backward"
  callback-uri: "https://partners.iot.sberdevices.ru"
  # Bearer-,       (    )
  bearer-token: ""

scriptengine:
  #        executionNumberLimit.
  #       scriptTimeLimit     scriptTimeLimit (),
  #   .
  frequentScript:
    executionNumberLimit: 60
    scriptTimeLimit: 60000
  #          executionNumberLimit.
  #       scriptTimeLimit     scriptTimeLimit (),
  #     .
  frequentScriptsInHouse:
    executionNumberLimit: 120
    scriptTimeLimit: 120000
```

```
logging:
  config: "classpath:logback-prod{{ '-without-logstash' if without_elk else '' }}.xml"
  logback:
    dir: "/var/log/eltex-sc"
{% if not without_elk %}
  logstash:
    host: "{{ 'logstash' if iot_server_name == elk_server_name else elk_server_name }}"
    port: {{ logstash_port }}
{% endif %}
  level:
    root: {{ iot_core_log_level }}
    org.springframework: WARN
    org.springframework.cache: WARN
    org.springframework.data: WARN
    org.springframework.web: WARN
    _org.springframework.web: WARN
    org.springframework.security: WARN
    org.springframework.security.oauth2: WARN
    org.springdoc: WARN
    org.mongodb: WARN
    org.eclipse.jetty: WARN
    org.apache.http: WARN
    org.hibernate: WARN
    org.jboss: WARN
    org.quartz.core.QuartzSchedulerThread: WARN
    io.swagger: WARN
    io.github.resilience4j: WARN
    io.netty: WARN
    io.mongock: WARN
    io.micrometer: WARN
    com.hazelcast: WARN
    com.hivemq: WARN
```

:

- **testData** — ;
- **fileStorage** — (Docker);
- **logger** — . debug mongodb: DEBUG;
- **controllerGateTCP** — , Ethernet TCP-;
- **controllerGate port** — , (8070);
- **controllerGateSecurity port** — , c SSL, 8072;

- **api port** — API - ;
- **api sslPort** — API - SSL-;
- **ui port** — , . ., " ";
- **mqttBroker** — MQTT;
- **captcha** — CAPTCHA;
- **olapservice** — OLAP (Docker);
- **server name** — , / UI;
- **electricMeterScheduler** — , (30 ,). : cron: 3 0/1 * * * ? — 3 ;
- **electricMeterArchiveScheduler** — , ;
- **services** — (Eltex NGW, Google FCM, Apple APNS) ;
- **video** — Flussonic;
- **ssl** — SSL (Docker);
- **proxy** — -;
- **billing** — ;
- **notifications** — push-.

  :

  - duplicate_delay_sec — , ( ), ;

  - antispam_time_sec — , (, " 1", " 2" . .), ;

  - delay_push_time_millisec — push-, .
- **guard** — ;
- **swagger** — API Eltex SC. **:8071/api/v1/swagger-ui/**.
- **controller: delay_answer_from_control_millisec** — ;

, :

- **8069** — Ethernet TCP-;
- **8070** — WS- ;
- **8071** — HTTP- API-;
- **8072** — WSS- ;
- **8073** — HTTPS- API-;
- **8883** — MQTT-;
- **8088** — CAPTCHA.

Eltex SC . - , Eltex Home.

. : **< Eltex SC>**.

- .

```
htop
```

MEM% CPU% mongo eltex-sc.

```
df -h
```

.

Z-Wave Wi-Fi

```
netstat -na | grep 8070
netstat -na | grep 8883
```

, :

- :
  - **ESTABLISHED**, **LISTEN** — ;

    - **LAST_ACK** — , IP;
    - **TIME_WAIT**, **CLOSE_WAIT** — , ;
- 2- — ;
- 3- — , ;
- 5- — IP- .

, . , - , - .

- **/storage/iot/core/var/log/eltex-sc/server***. . (15 2022) , :

```
grep <  > server-2022-01-15* > <   >
```

, :

- **-i** — ;
- **-n** — ;
- **-h** — ;
- **-A** — ;
- **-B** — .

:

```
grep -i -n -A 5 -B 2 error server-2022-01-15* > errors.log
```

:

- *ERROR;*
- *ID IP* ;
- *PONG* — , , .

-

- — (IP —).

API . URL - :

```
<  Eltex SC>:< API>/api/v1/version
```

API — API HTTP (**8071/8073**). , API JSON.

:

```
{
  "version" : "1.25-3477",
  "api" : "1.0",
  "currentTime" : "2022-07-25T09:24:12.544842Z[Etc/UTC]"
}
```

http https

PKCS#8.

```
# head -1 /tmp/eltex-sc-api.key
-----BEGIN PRIVATE KEY-----

# head -1 /storage/iot/ssl/private/eltex-sc-api.key
-----BEGIN RSA PRIVATE KEY-----
```

- BEGIN PRIVATE KEY — PKCS#8;
- BEGIN RSA PRIVATE KEY — PKCS#1.

PKCS#1, PKCS#8.

PKCS#1 PKCS#8, letsencrypt:

```
openssl pkcs8 -topk8 -inform PEM -outform PEM -nocrypt -in __ -out ___.
```

CAPTCHA

CAPTCHA . , - .

/etc/ansible-iot-1.25/templates/default-for-docker.yml.j2

:

```
captcha:
#     CAPTCHA-
  host: "captcha"
  port: 8088
#  CAPTCHA-
  level: "easy"
```

:

easy	. .
medium	. .
hard	. .